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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,006	12/19/2000	Nobuyuki Kita	019519-280	2793

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EXAMINER	
GILLIAM, BARBARA LEE	

13

ART UNIT	PAPER NUMBER
1752	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/739,006	KITA, NOBUYUKI	
	Examin r	Art Unit	
	Barbara Gilliam	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disp sition of Claims

4)☒ Claim(s) *1-7 and 9-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9 and 11* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 9, 2003 has been entered.

Response to Amendment

2. Claims 1-7, 9-11 are present. Claim 8 was canceled.

3. The rejection under 35 U.S.C. 103(a) over DeBoer et al. in view of Inno et al. is withdrawn in light of Applicant's statement of assignment in view of the provisions of 35 U.S.C. 103(c).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. New claim 11 requires that the

water-receptive layer is not cross-linked. Applicant pointed to the paragraph bridging pages 19 and 20 for support. It is clear from this paragraph that a cross-linking agent may or may not be added however claim 11 is not excluding a cross-linking agent but the actual cross-linked nature of the water-receptive layer itself. In the preceding paragraph, "cross-linking agents capable of accelerating cross-linking of colloids may be added" which suggests the colloids of the water receptive layer will cross link anyway, without the assistance of a crosslinking agent.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 5-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeBoer et al. in view of Gardner, Jr. et al.

a. In US Patent No. 6,110,645, DeBoer et al. teach a method of making a lithographic printing plate comprising exposing a support, an ink receptive photothermal conversion layer and an ink repellant layer to a laser beam having an intensity great than 0.1 mW/μ^2 wherein the ink repellant layer contains a crosslinked polymeric matrix containing a colloid of an oxide or a hydroxide of a metal selected from the group consisting of beryllium, magnesium, aluminum, silicon, gadolinium, germanium, arsenic, indium, tin, antimony, tellurium, lead, bismuth, a transition metal,

and combinations thereof. The crosslinked polymeric matrix is derived from a crosslinking agent which is alkoxy silane, an alkyl titanate, an alkyl zirconate or an alkyl aluminate (claim 1). The ink repellant layer can be hydrophilic (claim 6) and the thickness of the layer can range from 0.05 to 1 micron (claims 8-9). Preferably aminopropyltriethoxysilane is used as the crosslinking agent (column 5, lines 11-16). The hydrophilic ink repellant layer meets the present limitations for the water-receptive layer. The ink receptive layer comprises a film forming binder such as polycarbonates, polyacrylates, polyesters, nitrocellulose, cellulose acetate propionate and cellulose acetate (column 4, lines 40-48). The ink receptive layer meets the present limitations for the ink-receptive layer wherein the binder meets the present limitations for the oleophilic organic high molecular compound.

b. DeBoer et al. do not teach a protective layer for the printing plate however it would have been obvious to incorporate a protective cover layer based on the teachings of Gardner, Jr. et al. In US Patent No. 5,939,237, Gardner, Jr. et al. teach a no-process printing plate forming photosensitive article having a protective top coat layer. The protective top layer may provide the no-process printing plate with protection from contamination during handling, improved suppression of odors during imaging and improved roll-up performance on press. The hydrophilic protective top coat layer is removed on press by action of the fountain solution and/or ink (abstract & column 8, lines 6 – 60). Therefore it would have been obvious to coat the printing plate of DeBoer et al. with a protective layer based on the teachings of Gardner, Jr. et al. to protect the plate from contamination during handling, improve roll-up performance on

press and suppress odors wherein the protective layer is easily removed with water or fountain solution.

c. Independent claim 1 is a product-by-process claim. Applicant is reminded of MPEP 2113: "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." However, in the present application the prior art teaches the process limitation as well. The ink receptive layer of Example 3 corresponds to the ink receptive layer of Example 1 wherein methyl ethyl ketone and methylisobutyl ketone were used to coat the carbon black, nitrocellulose and zirconium oxide containing layer. In Example 3, the hydrophilic ink repellant layer comprising 1.6 weight % aminopropyltriethoxysilane was coated using water and ethanol. Ethanol is capable of dissolving the nitrocellulose of the ink receptive layer as required in the present application.

8. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeBoer et al. in view of Gardner, Jr. et al. as applied to claims 1, 5-7 and 9 above, and further in view of Vermeersch et al.

a. As indicated in the corresponding 102(e) rejection above, DeBoer et al. (US Patent No. 6,110,645) teach a method of making a lithographic printing plate comprising exposing a support, an ink receptive photothermal conversion layer and an

ink repellant layer to a laser beam having an intensity great than 0.1 mW/μ^2 wherein the ink repellant layer contains a crosslinked polymeric matrix containing a colloid of an oxide or a hydroxide of a metal. The crosslinked polymeric matrix is derived from a crosslinking agent which is alkoxy silane, an alkyl titanate, an alkyl zirconate or an alkyl aluminate (claim 1). The patent fails to specify the crosslinking polymer of the ink repellant layer (column 5, lines 11-16). It would have been obvious to use conventional hydrophilic crosslinking resins including the hydrophilic binders of Vermeersch et al.

b. In US Patent No. 6,210,857, Vermeersch et al teach a heat-sensitive imaging element for providing a lithographic printing plate, comprising a lithographic base with a hydrophobic oleophilic surface and a top layer comprising a compound capable of converting light into heat and a hydrophilic polymer, characterized in that the hydrophilic polymer is crosslinked (abstract). A particularly suitable crosslinked hydrophilic layer may be obtained from a hydrophilic binder crosslinked with a crosslinking agent such as tetra-alkylorthosilicate. As the hydrophilic binder homopolymers and copolymers of hydroxylethyl acrylate or hydroxyethyl methacrylate can be sued (column 4, lines 50-65). In Examples 1-6, the hydrophilic binder is used in an amount of 9.1 weight %. The crosslinked hydrophilic layer preferably contains substances that increase the mechanical strength and the porosity of the layer. For this purpose colloidal silica can be used (column 5, lines 4-13).

c. Therefore it would have been *prima facie* obvious to one of ordinary skill in the art to make and image a printing plate comprising a support, an ink receptive photothermal conversion layer, an ink repellant layer and a protective layer with a laser beam wherein the ink repellant layer contains a crosslinked polymeric matrix containing

a hydrophilic binder, a crosslinking agent and a colloid of an oxide or a hydroxide of a metal with reasonable expectation of obtaining a printing plate with high image quality (DeBoer et al; column 3, lines 20-24) and mechanical strength (Vermeersch et al; column5, lines 4-13).

Allowable Subject Matter

9. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

a. There is no teaching or suggestion in the prior art of record to incorporate a compound capable of converting light to heat in the protective layer of Inno et al (US 6,500,599 B1) as required in the present claim.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara Gilliam whose telephone number is 703-305-1330. The examiner can normally be reached on Monday through Friday, 8:00 AM - 6:00 PM.

a. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on 703-308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

b. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Barbara Gilliam

Barbara Gilliam
Examiner, AU 1752
September 26, 2003